

REMARKS

This is a full and timely response to the non-final Office Action mailed September 21, 2004. Claims 63 – 100 remain pending. Specifically, claims 63 – 100 have been added, and claims 32 – 62 have been canceled without prejudice, waiver, or disclaimer. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

I. In the Specification

The Office Action alleges that “the specification includes statements which are not clear, concise and exact.” (Office Action, pg. 2). Specifically, the Office Action alleges that “microwaves and radio waves are not considered to be part of the range of frequencies included by the term ‘light’,” that “ultrasound waves are mechanical waves, not electromagnetic waves as is light,” and that “cosmic rays are stream [sic] of ionizing radiation of extraterrestrial origin.” (Office Action, pg. 3).

Without acquiescing to this argument, Applicants submit that the specification has been amended to remove reference to “microwaves,” “ultrasound waves,” and “cosmic rays.” Accordingly, Applicants submit that the objection to the specification should be withdrawn.

II. Objection to Claim 41 for an Informality is Moot

The Office Action indicates that claim 41 is objected to because there is insufficient antecedent basis for the limitation “a computer that comprises the processor”

in lines 1 and 2. In that claim 41 has been canceled, Applicants submit that the objection to claim 41 is moot.

III. The Rejection to Claims 33, 35, 38, 48, 50 and 53 Under 35 U.S.C. §112, 1st Paragraph is Moot

The Office Action rejects claims 33, 35, 38, 48, 50 and 53 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement.

Claims 38 and 53

As to claims 38 and 53, the Office Action alleges that the “specification fails to provide en [sic] explanation of how the claimed light source is capable of emitting light of an ultrasound waves, or cosmic rays nature [sic], as claimed.” (Office Action, pg. 4). In that claims 38 and 53 have been canceled, Applicants submit that the rejection to claims 38 and 53 is moot.

IV. The Rejection to Claims 33, 35, 38, 48, 50 and 53 Under 35 U.S.C. §112, 2nd Paragraph is Moot

The Office Action rejects claims 33, 35, 38, 48, 50 and 53 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claims 33, 35, 48, and 50

As to claims 33, 35, 48, and 50, the Office Action alleges that “Claim 33 is indefinite as it is not clear if the applicant’s intention was to claim an alternative

limitation (*e.g.* Markush group), or and [sic] inclusive limitation necessarily including all (emphasis added) the recited elements of the claimed group of electrical devices,” and that “Claims 33, 35, 48, and 50 are rejected for the same reasons as Claim 33.” (Office Action, pg. 4). In that claims 33, 35, 48, and 50 have been canceled, Applicants submit that the rejection to claims 33, 35, 48, and 50 is moot.

Claims 38 and 53

As to claims 38 and 53, the Office Action alleges that “claim 38 is indefinite as it recited the light emitting device as emitting light characterized as microwave, ultrasound waves, radio waves and cosmic rays (see line 4), such characterization going against the accepted meaning of the term ‘light’,” and that “Claim 53 is rejected for the same reasons as Claim 38.” (Office Action, pgs. 4-5). In that claims 38 and 53 have been canceled, Applicants submit that the rejection to claims 38 and 53 is moot.

V. Rejection of Claims 32 – 42, and 44 – 62 Under 35 U.S.C. §103(a) is Moot

The Office Action rejects claims 32 – 42 and 44 – 62 under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,616,078 to Oh (“*Oh*”) in view of U.S. Patent No. 5,010,412 to Garriss (“*Garriss*”). In that claims 32 – 42 and 44 – 62 have been canceled, the §103(a) rejection is believed to be moot.

VI. Rejection of Claims 43 Under 35 U.S.C. §103(a) is Moot

The Office Action additionally rejects claim 43 under 35 U.S.C. §103(a) as allegedly unpatentable over *Oh* in view of *Garriss* and further in view of U.S. Patent No.

5,706,399 to Bareis (“*Bareis*”). In that claim 43 has been canceled, the §103(a) rejection is believed to be moot.

VII. Newly Added Claims 63 – 97 are Patentable over Any Combination of *Oh* in View of *Garris* and Further in View of *Bareis*

While Applicants submit that previous claims 32 – 62 were patentable over the proposed combination of *Oh*, *Garris*, and *Bareis*, Applicants submit that newly added claims 63 – 97 clarify several important features which may not have been given full consideration with respect to the presentation of previous claims 32 – 62. Furthermore, a number of informalities, previously alleged in claims 32 – 62, have been addressed.

Independent Claim 63 (and Dependent Claims 64 – 72)

Newly added Claim 63 recites:

63. A system comprising:

an image capturing device having a portable housing configured to be worn on a user including:

a light-emitting device configured to emit light on an object of the user;

an image-forming device configured to form one or more images of the object due to the emitted light that is reflected from the object; and

a processor configured to:
analyze motion of the object based on the one or more images; and
generate at least one command to control an electrical device; and
a communication device configured to wirelessly communicate the at least one command from the processor to the electrical device.

(*Emphasis added*). Applicants respectfully submit that claim 63 patentably defines over any combination of *Oh*, *Garris*, and *Bareis* for at least the reason that the proposed combination of *Oh*, *Garris*, and *Bareis* and the knowledge of one skilled in the art, fails to disclose, teach or suggest the features emphasized in bold text above. MPEP §2143.03.

The Oh Reference

Oh does not disclose “*an image-capturing device having a portable housing configured to be worn on a user*” as recited in claim 63. Rather, *Oh* apparently discloses, at most, that “motion capture unit 3 includes a pair of video cameras 31 and 31’ (col. 4, lines 19-20), and that “the video cameras 31 and 31’ are disposed at positions suitable to overlook the player Q obliquely from front and above.” (Col. 4, lines 43-45). Thus, the cameras 31 and 31’ are not “configured to be worn by a user” and do not have a “portable housing” as recited in claim 63.

Further, Applicants acknowledge that *Oh* discloses that “sets of markers M may directly be attached to the body of the player Q.” (Col. 4, lines 55-56). However, even assuming that *Oh* discloses **markers** that may be worn by a player, the markers are not “an image-capturing device” as recited in claim 63.

Further, *Oh* does not disclose “an image-capturing device having a portable housing configured to be worn on a user including: *a light-emitting device configured to emit light on an object of the user*” as recited in claim 63. The Office Action apparently indicates that this feature is “inherent.” (Office Action, pg. 5). However, Applicants traverse this allegation. In fact, *Oh* discloses that “sets of markers M are adapted to indicate body parts or joints of the player Q such as a head, hands, arms, legs and elbows, and each include a light omitting or reflecting member such as a color pad, a light-reflecting gum pad, a visible radiation LED (light emitting diode) and infrared ray LED.” (Emphasis added, col. 4, lines 50-55). Further, *Oh* discloses:

The video cameras 31 and 31' each include an image sensor such as CCDs (charge coupled devices) and pick up object images in accordance with the standard or specially-specified signal system. In the case where

the sets of markers M emit light by means of the visible radiation LED, the video cameras 31 and 31' are a color video camera provided with an image sensor device such as CCDs. In the case where the sets of markers M emit light by means of the infrared ray LED, an IR filter which cuts visible rays is provided on the surface of the optical lens of each camera so that the sets of markers M can be detected from the background of the camera image.

Thus, apparently, the markers M do not emit light “*on an object of the user*” as recited in claim 63. Rather, the light is emitted away from the user (upon which the markers are worn) such that the cameras 31 and 31' are able to directly detect the position of the markers.

Further, *Oh* simply does not disclose “*a communication device configured to wirelessly communicate the at least one command from the processor to the electrical device*” as recited in claim 63. In fact, not even the markers M of *Oh* “wirelessly communicate” with the remainder of the *Oh* system. Rather, the video cameras 31 and 31' merely sense the light emitted from the markers. Further, one skilled in the art at the time of the invention would not be motivated to add such a feature because the system of *Oh* is not “portable” as in claim 63.

The Garriss Reference

Garriss also does not disclose “*an image-capturing device having a portable housing configured to be worn on a user*” as recited in claim 63. Applicants acknowledge *Garriss* discloses that “the present invention relates to light sources and in particular to a high frequency, low power light source employing light emitting diodes for illuminating an object photographed by a portable video camera.” (*Emphasis added*, col. 1, lines 6-9).

However, *Garriss* does not disclose, teach, or suggest that the alleged image-capturing device is “configured to be worn on a user” as recited in claim 63.

Further, *Garriss* does not disclose “an image-capturing device having a portable housing configured to be worn on a user including: *a light-emitting device configured to emit light on an object of the user*” as recited in claim 63. Rather, *Garriss* discloses, at most, a light source for “illuminating *an* object photographed by a portable video camera.” (*Emphasis added*, col. 1, lines 8-9). Furthermore, *Garriss* does not teach or suggest that the light source for the portable video camera is used to emit light “on an object of the user” as claimed.

Further, *Garriss* also does not disclose, teach, or suggest “*a communication device configured to wirelessly communicate the at least one command from the processor to the electrical device*” as recited in claim 63. *Garriss* discloses, at most, that “camera 24 generates video signals representing the light intensity at regularly spaced points on the surface of object 11,” (col. 3, lines 24-25) and that “these signals may, for example, be conveyed via an external cable 36 to a conventional ‘frame grabber’ (not shown) for converting the video signals into gray scale bit map data.” (Col. 3, lines 26-30). The “video signal” of is not equivalent to a “command” as recited in claim 63. Furthermore, the “external cable” of is not equivalent to a device configured to “wirelessly communicate.” Accordingly, *Garriss* also does not disclose, teach, or suggest “a communication device configured to wirelessly communicate the at least one command from the processor to the electrical device” as recited in claim 63.

The Bareis Reference

Bareis discloses that an “advanced electronic vehicle alarm system allows control of alarm functions to be accomplished using specific spoken commands.” (Abstract). *Bareis* does not disclose any kind of “image-capturing apparatus,” “light-emitting device,” or “a communication device configured to wirelessly communicate” as recited in claim 63. Accordingly, Applicants submit that *Bareis* is apparently irrelevant to independent claim 63.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 63 patently defines over any combination of *Oh*, *Garriss*, and *Bareis* for at least the reason that the proposed combination of *Oh*, *Garriss*, and *Bareis* and the knowledge of one skilled in the art, fails to disclose, teach or suggest “*an image-capturing device having a portable housing configured to be worn on a user*,” “*a light-emitting device configured to emit light on an object of the user*,” or “*a communication device configured to wirelessly communicate the at least one command from the processor to the electrical device*” as recited in claim 63. Furthermore, dependent claims 64 – 72, which depend therefrom, are allowable for at least the same reasons.

Independent Claim 73 (and Dependent Claims 74 – 81)

Newly added Claim 73 recites:

73. A method comprising the steps of:
 emitting light from a portable image-capturing device configured to be worn by a user, onto an object of the user;
 capturing one or more images of the object due to the emitted light that is reflected from the object;
 processing data corresponding to the one or more images of the object to analyze motion of the object;
 generating at least one command to control an electrical device based on the motion of the object; and

wirelessly communicating the at least one command from the processor to the electrical device.

(*Emphasis added*). Applicants respectfully submit that claim 73 patentably defines over any combination of *Oh*, *Garris*, and *Bareis* for at least the reason that the proposed combination of *Oh*, *Garris*, and *Bareis* and the knowledge of one skilled in the art, fails to disclose, teach or suggest the features emphasized in bold text above. MPEP §2143.03.

The Oh Reference

Oh does not disclose “*emitting light from a portable image-capturing device configured to be worn by a user, onto an object of the user*” as recited in claim 73. Rather, *Oh* apparently discloses, at most, that “motion capture unit 3 includes a pair of video cameras 31 and 31’ (col. 4, lines 19-20), and that “the video cameras 31 and 31’ are disposed at positions suitable to overlook the player Q obliquely from front and above.” (Col. 4, lines 43-45). Thus, the cameras 31 and 31’ are not “configured to be worn by a user” and each of them are not a “portable image-capturing device” as recited in claim 73.

Further, Applicants acknowledge that *Oh* discloses that “sets of markers M may directly be attached to the body of the player Q.” (Col. 4, lines 55-56). However, even assuming that *Oh* discloses *markers* that may be worn by a player, the markers are not “an image-capturing device” as recited in claim 73.

Further, *Oh* does not disclose “emitting light from a portable image-capturing device configured to be worn by a user, *onto an object of the user*” as recited in claim 73. The Office Action apparently indicates that this feature is “inherent.” (Office Action, pg. 5). However, Applicants traverse this allegation. In fact, *Oh* discloses that “sets of

markers M are adapted to indicate body parts or joints of the player Q such as a head, hands, arms, legs and elbows, and each include a light omitting or reflecting member such as a color pad, a light-reflecting gum pad, a visible radiation LED (light emitting diode) and infrared ray LED.” (*Emphasis added*, col. 4, lines 50-55). Further, *Oh* discloses:

The video cameras 31 and 31' each include an image sensor such as CCDs (charge coupled devices) and pick up object images in accordance with the standard or specially-specified signal system. In the case where the sets of markers M emit light by means of the visible radiation LED, the video cameras 31 and 31' are a color video camera provided with an image sensor device such as CCDs. In the case where the sets of markers M emit light by means of the infrared ray LED, an IR filter which cuts visible rays is provided on the surface of the optical lens of each camera so that the sets of markers M can be detected from the background of the camera image.

Thus, apparently, the markers M do not emit light “*onto an object of the user*” as recited in claim 73. Rather, the light is emitted away from the user (upon which the markers are worn) such that the cameras 31 and 31' are able to directly detect the position of the markers.

Further, *Oh* simply does not disclose “*wirelessly communicating the at least one command from the processor to the electrical device*” as recited in claim 73. In fact, not even the markers M of *Oh* “wirelessly communicate” with the remainder of the *Oh* system. Rather, the video cameras 31 and 31' merely sense the light emitted from the markers. Further, one skilled in the art at the time of the invention would not be motivated to add such a feature because the system of *Oh* is not “portable” as in claim 73.

The Garriss Reference

Garriss also does not disclose “emitting light from a portable image-capturing device configured to be worn by a user, onto an object of the user” as recited in claim 73.

Applicants acknowledge *Garriss* discloses that “the present invention relates to light sources and in particular to a high frequency, low power light source employing light emitting diodes for illuminating an object photographed by a portable video camera.” (*Emphasis added*, col. 1, lines 6-9). However, *Garriss* does not disclose, teach, or suggest that the alleged image-capturing device is “configured to be worn on a user” as recited in claim 73.

Further, *Garriss* does not disclose “emitting light from a portable image-capturing device configured to be worn by a user, ***onto an object of the user***” as recited in claim 73. Rather, *Garriss* discloses, at most, a light source for “illuminating ***an*** object photographed by a portable video camera.” (*Emphasis added*, col. 1, lines 8-9). Furthermore, *Garriss* does not teach or suggest that the light source for the portable video camera is used to emit light “onto an object of the user” as claimed.

Further, *Garriss* also does not disclose, teach, or suggest “***wirelessly communicating the at least one command from the processor to the electrical device***” as recited in claim 73. *Garriss* discloses, at most, that “camera 24 generates video signals representing the light intensity at regularly spaced points on the surface of object 11,” (col. 3, lines 24-25) and that “these signals may, for example, be conveyed via an external cable 36 to a conventional ‘frame grabber’ (not shown) for converting the video signals into gray scale bit map data.” (Col. 3, lines 26-30). The “video signal” of is not equivalent to a “command” as recited in claim 73. Furthermore, the “external cable” of *Garriss* is not

equivalent to a device configured to “wirelessly communicate.” Accordingly, *Garriss* also does not disclose, teach, or suggest “*wirelessly communicating the at least one command from the processor to the electrical device*” as recited in claim 73.

The Bareis Reference

Bareis discloses that an “advanced electronic vehicle alarm system allows control of alarm functions to be accomplished using specific spoken commands.” (Abstract). *Bareis* does not disclose steps for “emitting light”, “capturing one or more images,” or “wirelessly communicating” as recited in claim 73. Accordingly, Applicants submits that *Bareis* is apparently irrelevant to independent claim 73.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 73 patently defines over any combination of *Oh*, *Garriss*, and *Bareis* for at least the reason that the proposed combination of *Oh*, *Garriss*, and *Bareis* and the knowledge of one skilled in the art, fails to disclose, teach or suggest “*emitting light from a portable image-capturing device configured to be worn by a user, onto an object of the user*” or “*wirelessly communicating the at least one command from the processor to the electrical device*” as recited in claim 73. Furthermore, dependent claims 74 – 81, which depend therefrom, are allowable for at least the same reasons.

Independent Claim 82 (and Dependent Claims 82 – 91)

Newly added Claim 82 recites:

82. A system comprising:
means for capturing an image having a portable housing configured to be worn on a user including:

means for emitting light on an object of the user;
means for forming one or more images of the object due to
the emitted light that is reflected from the object; and
means for processing configured to:
analyze motion of the object based on the one or
more images; and
generate at least one command to control an
electrical device; and
*means for wirelessly communicating the at least one command
from the processor to the electrical device.*

(*Emphasis added*). Applicants respectfully submit that claim 82 patently defines over any combination of *Oh*, *Garris*, and *Bareis* for at least the reason that the proposed combination of *Oh*, *Garris*, and *Bareis* and the knowledge of one skilled in the art, fails to disclose, teach or suggest the features emphasized in bold text above. MPEP §2143.03.

The Oh Reference

Oh does not disclose “***means for capturing an image having a portable housing configured to be worn on a user***” as recited in claim 82. Rather, *Oh* apparently discloses, at most, that “motion capture unit 3 includes a pair of video cameras 31 and 31’ (col. 4, lines 19-20), and that “the video cameras 31 and 31’ are disposed at positions suitable to overlook the player Q obliquely from front and above.” (Col. 4, lines 43-45). Thus, the cameras 31 and 31’ are not “configured to be worn by a user” and each of them do not have a “portable housing” as recited in claim 82.

Further, Applicants acknowledge that *Oh* discloses that “sets of markers M may directly be attached to the body of the player Q.” (Col. 4, lines 55-56). However, even assuming that *Oh* discloses **markers** that may be worn by a player, the markers (which do

not capture images) are not equivalent to a “***means for capturing an image***” as recited in claim 82.

Further, *Oh* does not disclose a means for capturing an image includes a “***means for emitting light on an object of the user***” as recited in claim 82. The Office Action apparently indicates that this feature is “inherent.” (Office Action, pg. 5). However, Applicants traverse this allegation. In fact, *Oh* discloses that “sets of markers M are adapted to indicate body parts or joints of the player Q such as a head, hands, arms, legs and elbows, and each include a light omitting or reflecting member such as a color pad, a light-reflecting gum pad, a visible radiation LED (light emitting diode) and infrared ray LED.” (*Emphasis added*, col. 4, lines 50-55). Further, *Oh* discloses:

The video cameras 31 and 31' each include an image sensor such as CCDs (charge coupled devices) and pick up object images in accordance with the standard or specially-specified signal system. In the case where the sets of markers M emit light by means of the visible radiation LED, the video cameras 31 and 31' are a color video camera provided with an image sensor device such as CCDs. In the case where the sets of markers M emit light by means of the infrared ray LED, an IR filter which cuts visible rays is provided on the surface of the optical lens of each camera so that the sets of markers M can be detected from the background of the camera image.

Thus, apparently, the markers M do not emit light “***on an object of the user***” as recited in claim 82. Rather, the light is emitted away from the user (upon which the markers are worn) such that the cameras 31 and 31' are able to directly detect the position of the markers.

Further, *Oh* simply does not disclose “***means for wirelessly communicating the at least one command from the processor to the electrical device***” as recited in claim 82. In fact, not even the markers M of *Oh* “wirelessly communicate” with the remainder of the *Oh*

system. Rather, the video cameras 31 and 31' merely sense the light emitted from the markers. Further, one skilled in the art at the time of the invention would not be motivated to add such a feature because the system of *Oh* is not “portable” as in claim 82.

The Garriss Reference

Garriss also does not disclose “***means for capturing an image having a portable housing configured to be worn on a user***” as recited in claim 82. Applicants acknowledge *Garriss* discloses that “the present invention relates to light sources and in particular to a high frequency, low power light source employing light emitting diodes for illuminating an object photographed by a portable video camera.” (*Emphasis added*, col. 1, lines 6-9). However, *Garriss* does not disclose, teach, or suggest that the alleged image-capturing device is “configured to be worn on a user” as recited in claim 82.

Further, *Garriss* does not disclose means for capturing an image including “means for emitting light ***on an object of the user***” as recited in claim 82. Rather, *Garriss* discloses, at most, a light source for “illuminating ***an*** object photographed by a portable video camera.” (*Emphasis added*, col. 1, lines 8-9). Furthermore, *Garriss* does not teach or suggest that the light source for the portable video camera is used to emit light “onto an object of the user” as claimed.

Further, *Garriss* also does not disclose, teach, or suggest “***means for wirelessly communicating the at least one command from the processor to the electrical device***” as recited in claim 82. *Garriss* discloses, at most, that “camera 24 generates video signals representing the light intensity at regularly spaced points on the surface of object 11,” (col. 3, lines 24-25) and that “these signals may, for example, be conveyed via an external cable

36 to a conventional ‘frame grabber’ (not shown) for converting the video signals into gray scale bit map data.” (Col. 3, lines 26-30). The “video signal” of is not equivalent to a “command” as recited in claim 82. Furthermore, the “external cable” of *Garriss* is not equivalent to a device configured to “wirelessly communicate.” Accordingly, *Garriss* also does not disclose, teach, or suggest “*means for wirelessly communicating the at least one command from the processor to the electrical device*” as recited in claim 82.

The Bareis Reference

Bareis discloses that an “advanced electronic vehicle alarm system allows control of alarm functions to be accomplished using specific spoken commands.” (Abstract). *Bareis* does not disclose “means for capturing an image,” “means for emitting light,” or “means for wirelessly communicating” as recited in claim 82. Accordingly, Applicants submits that *Bareis* is apparently irrelevant to independent claim 82.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 82 patently defines over any combination of *Oh*, *Garriss*, and *Bareis* for at least the reason that the proposed combination of *Oh*, *Garriss*, and *Bareis* and the knowledge of one skilled in the art, fails to disclose, teach or suggest “*means for capturing an image having a portable housing configured to be worn on a user*,” “*means for emitting light on an object of the user*,” or “*means for wirelessly communicating the at least one command from the processor to the electrical device*” as recited in claim 82. Furthermore, dependent claims 83 – 91, which depend therefrom, are allowable for at least the same reasons.

Independent Claim 92 (and Dependent Claims 93 - 100)

Newly added claim 92 recites:

92. A system comprising:

an image capturing device having a portable housing configured to be worn on a user including:

a light-emitting device configured to emit infrared light on an object of the user;

an image-forming device configured to form one or more images of the object due to the emitted infrared light that is reflected from the object; and

a processor configured to monitor a condition of the user by processing data corresponding to the one or more images of the object.

(Emphasis added). Applicants respectfully submit that claim 92 patentably defines over any combination of *Oh*, *Garris*, and *Bareis* for at least the reason that the proposed combination of *Oh*, *Garris*, and *Bareis* and the knowledge of one skilled in the art, fails to disclose, teach or suggest the features emphasized in bold text above. MPEP §2143.03.

The Oh Reference

Oh does not disclose “***an image-capturing device having a portable housing configured to be worn on a user***” as recited in claim 92. Rather, *Oh* apparently discloses, at most, that “motion capture unit 3 includes a pair of video cameras 31 and 31’ (col. 4, lines 19-20), and that “the video cameras 31 and 31’ are disposed at positions suitable to overlook the player Q obliquely from front and above.” (Col. 4, lines 43-45). Thus, the cameras 31 and 31’ are not “configured to be worn by a user” and do not have a “portable housing” as recited in claim 92.

Further, Applicants acknowledge that *Oh* discloses that “sets of markers M may directly be attached to the body of the player Q.” (Col. 4, lines 55-56). However, even

assuming that *Oh* discloses **markers** that may be worn by a player, the markers are not “an image-capturing device” as recited in claim 92.

Further, *Oh* does not disclose “an image-capturing device having a portable housing configured to be worn on a user including: **a light-emitting device configured to emit infrared light on an object of the user**” as recited in claim 92. The Office Action apparently indicates that this feature is “inherent.” (Office Action, pg. 5). However, Applicants traverse this allegation. In fact, *Oh* discloses that “sets of markers M are adapted to indicate body parts or joints of the player Q such as a head, hands, arms, legs and elbows, and each include a light omitting or reflecting member such as a color pad, a light-reflecting gum pad, a visible radiation LED (light emitting diode) and infrared ray LED.” (*Emphasis added*, col. 4, lines 50-55). Further, *Oh* discloses:

The video cameras 31 and 31' each include an image sensor such as CCDs (charge coupled devices) and pick up object images in accordance with the standard or specially-specified signal system. In the case where the sets of markers M emit light by means of the visible radiation LED, the video cameras 31 and 31' are a color video camera provided with an image sensor device such as CCDs. In the case where the sets of markers M emit light by means of the infrared ray LED, an IR filter which cuts visible rays is provided on the surface of the optical lens of each camera so that the sets of markers M can be detected from the background of the camera image.

Thus, apparently, the markers M do not emit light “**on an object of the user**” as recited in claim 92. Rather, the light is emitted away from the user (upon which the markers are worn) such that the cameras 31 and 31' are able to directly detect the position of the markers.

Further, *Oh* simply does not disclose “**a processor configured to monitor a condition of the user by processing data corresponding to the one or more images of the**

object" as recited in claim 92. The Office Action apparently alleges that "it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to use the apparatus of OH and GARRISS to monitor conditions such as including [sic] tremors." (Office Action, pg. 10). However, the Office Action does not provide any basis, motivation, or suggestion for this allegation. In fact, neither *Oh* or *Garriss* are related in any manner to monitoring health related conditions. Accordingly, Applicants respectfully submit that the allegation is a classic example of impermissible hindsight reasoning based solely on Applicants' disclosure.

The Office Action also alleges that "the apparatus of OH, disclosing all the structural limitations of the claimed invention and is therefore considered to meet the functional limitations." (Office Action, pg. 10). As an initial matter, *Oh* does not apparently disclose all of the structural limitations of the claimed invention. Furthermore, functional limitations must be considered like any other limitation. *See* MPEP §2173.05(g). In particular, Applicants submit that the language reciting "*a processor configured to monitor a condition of the user by processing data corresponding to the one or more images of the object*" must be considered.

The Garriss Reference

Garriss also does not disclose "*an image-capturing device having a portable housing configured to be worn on a user*" as recited in claim 92. Applicants acknowledge *Garriss* discloses that "the present invention relates to light sources and in particular to a high frequency, low power light source employing light emitting diodes for illuminating an object photographed by a portable video camera." (*Emphasis added*, col. 1, lines 6-9).

However, *Garriss* does not disclose, teach, or suggest that the alleged image-capturing device is “configured to be worn on a user” as recited in claim 92.

Further, *Garriss* does not disclose “an image-capturing device having a portable housing configured to be worn on a user including: ***a light-emitting device configured to emit infrared light on an object of the user***” as recited in claim 92. Rather, *Garriss* discloses, at most, a non-infrared light source for “illuminating ***an*** object photographed by a portable video camera.” (*Emphasis added*, col. 1, lines 8-9). Furthermore, *Garriss* does not teach or suggest that the light source for the portable video camera is used to emit light “on an object of the user” as claimed.

Further, *Garriss* simply does not disclose ***a processor configured to monitor a condition of the user by processing data corresponding to the one or more images of the object.*** as recited in claim 92. The Office Action apparently alleges that “it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to use the apparatus of OH and GARRISS to monitor conditions such as including [sic] tremors.” (Office Action, pg. 10). However, the Office Action does not provide any basis, motivation, or suggestion for this allegation. In fact, neither *Oh* or *Garriss* are related in any manner to monitoring health related conditions. Accordingly, Applicants respectfully submit that the allegation is a classic example of impermissible hindsight reasoning based solely on Applicants’ disclosure.

The Bareis Reference

Bareis discloses that an “advanced electronic vehicle alarm system allows control of alarm functions to be accomplished using specific spoken commands.” (Abstract). *Bareis*

does not disclose any kind of “image-capturing apparatus,” “light-emitting device,” or “a processor configured to monitor a condition of the user” as recited in claim 92.

Accordingly, Applicants submit that *Bareis* is apparently irrelevant to independent claim 92.

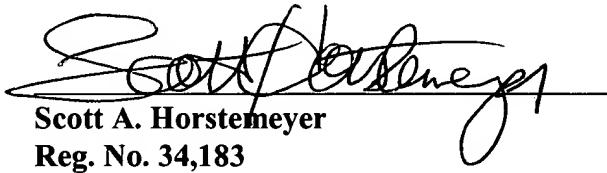
Accordingly, for at least these reasons, Applicants respectfully submit that claim 92 patently defines over any combination of *Oh*, *Garriss*, and *Bareis* for at least the reason that the proposed combination of *Oh*, *Garriss*, and *Bareis* and the knowledge of one skilled in the art, fails to disclose, teach or suggest “*an image-capturing device having a portable housing configured to be worn on a user*,” “*a light-emitting device configured to emit infrared light on an object of the user*,” or “*a processor configured to monitor a condition of the user by processing data corresponding to the one or more images of the object*” as recited in claim 92. Furthermore, dependent claims 93 – 100, which depend therefrom, are allowable for at least the same reasons.

CONCLUSION

The Applicants respectfully submit that all claims are now in condition for allowance, and request that the Examiner pass this case to issuance. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

No fee is believed to be due in connection with this response. If, however, any fee is deemed to be payable, you are hereby authorized to charge any such fee to Deposit Account No. 20-0778.

Respectfully submitted,



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